

Figures

Fig 1 – Bird's eye view of the system

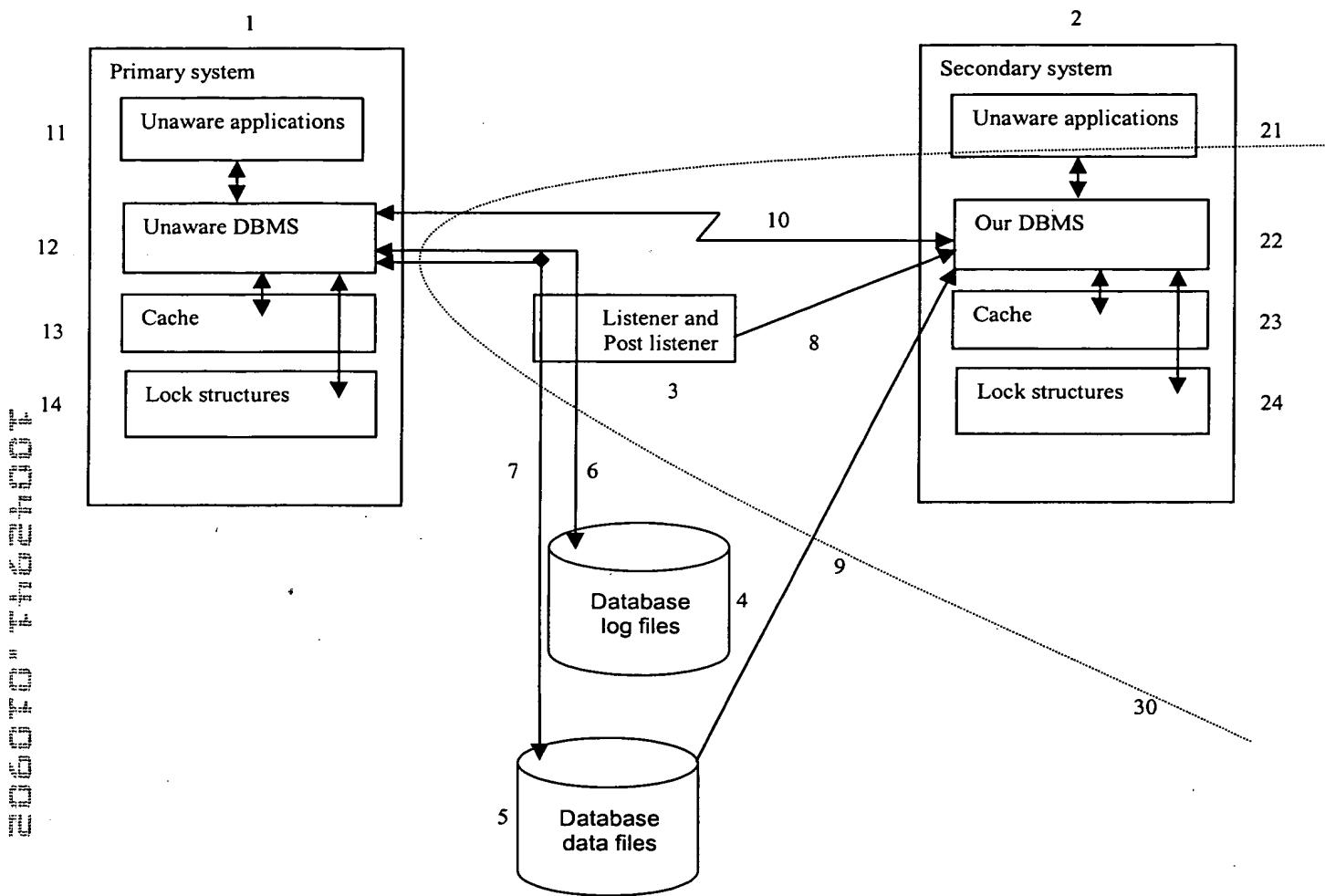


Fig 2 – the structure describing an Item of Interest

101	102	103	104	105	106	107	108	109	10A
Item type	ID	Dirty part	Previous transaction	Locking transaction	Optimization info	List of Pending reads	Before image	After image	Our transaction

100

Fig3 – The structure describing a transaction

200	
Transaction ID	List of items
202	203
301	302
303	
Item Type	Item ID
	Next Item

300

Fig 4 – Physical block written to the log

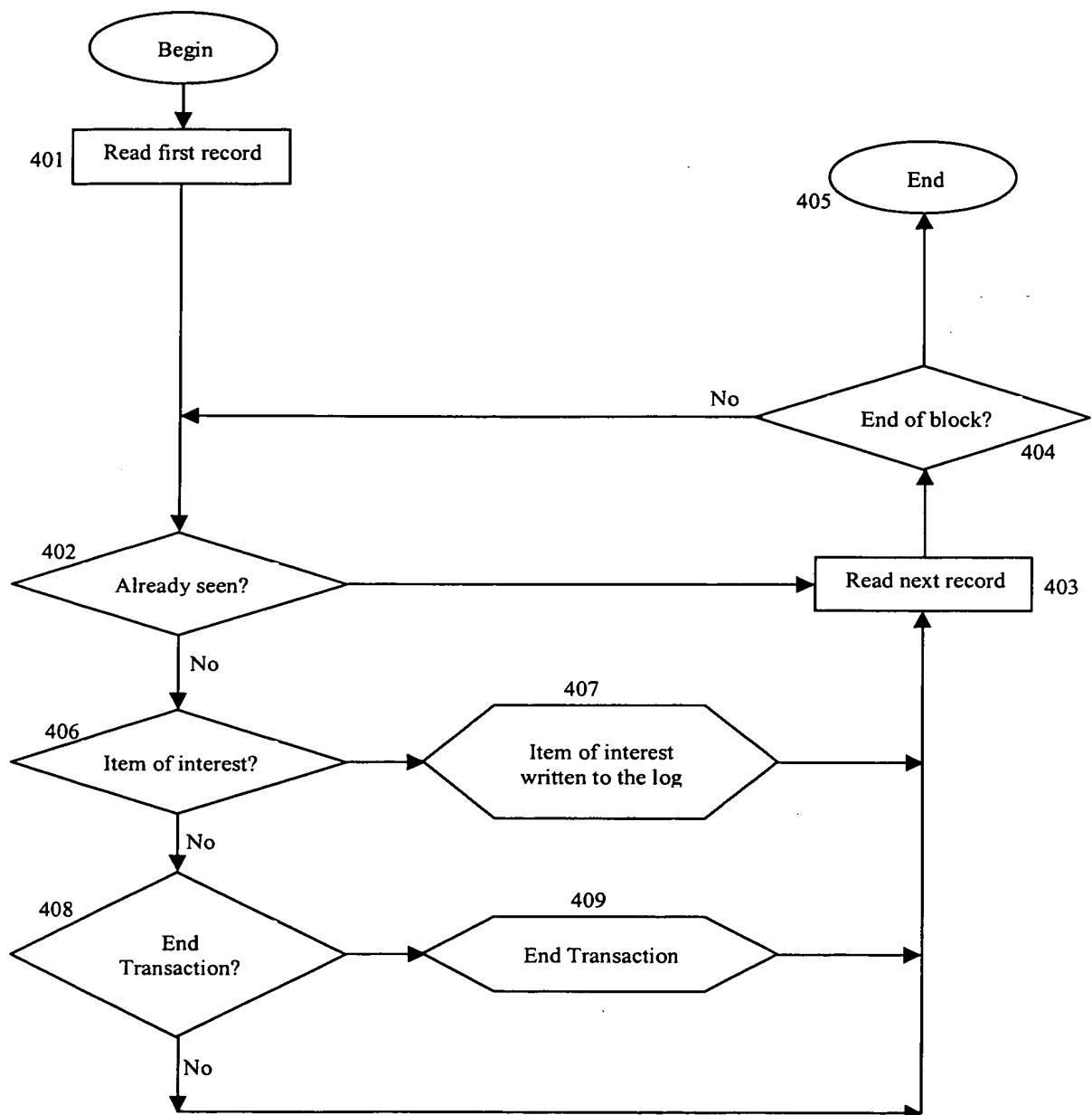


Fig 5 –Item of Interest written to the log

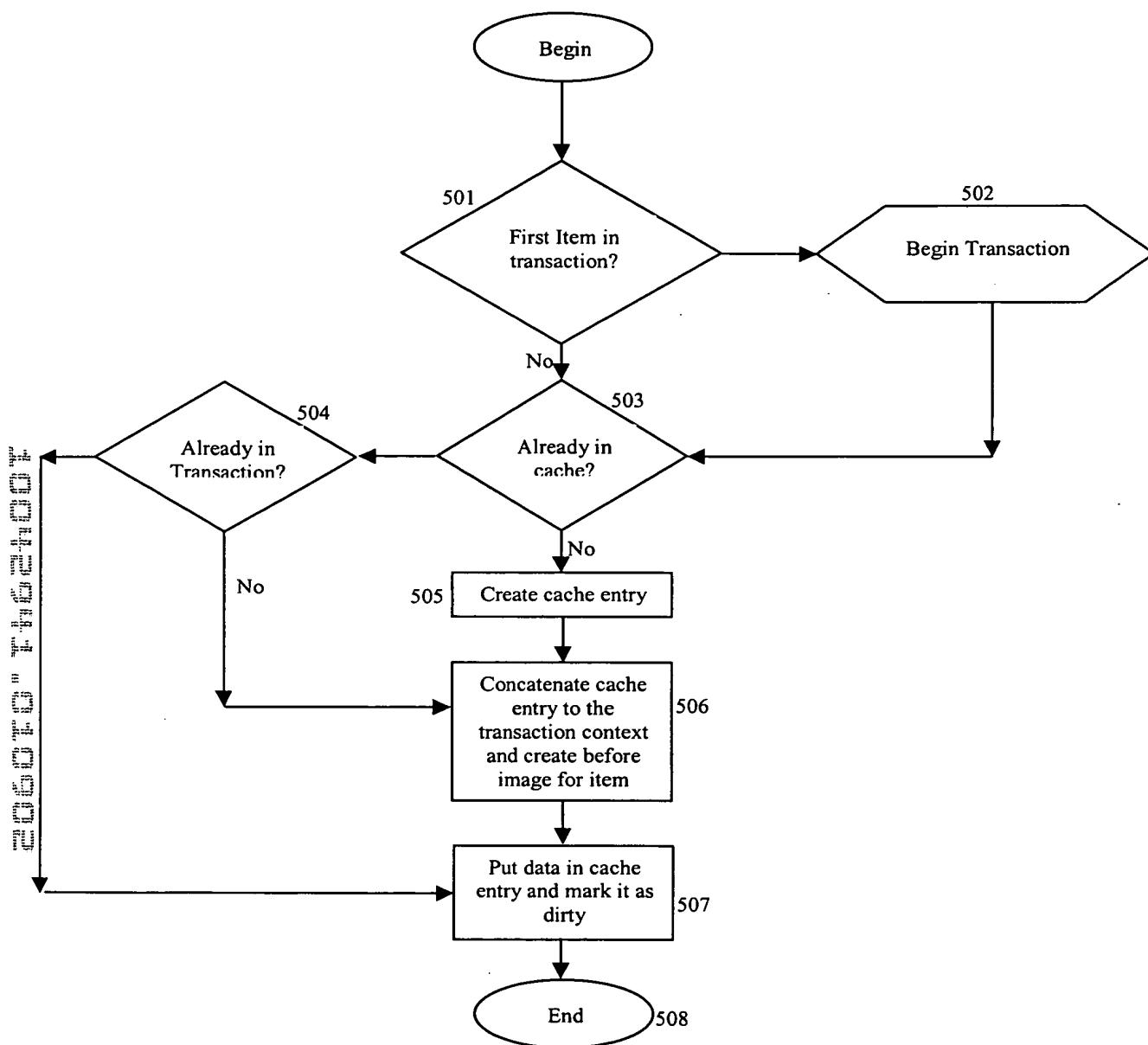


Fig 6 –Begin Transaction

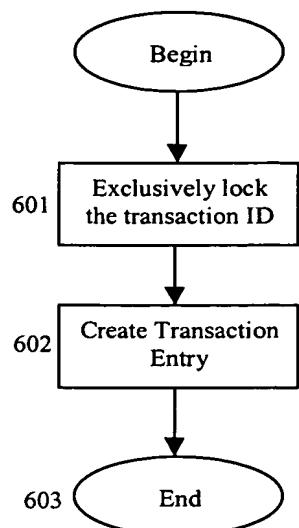


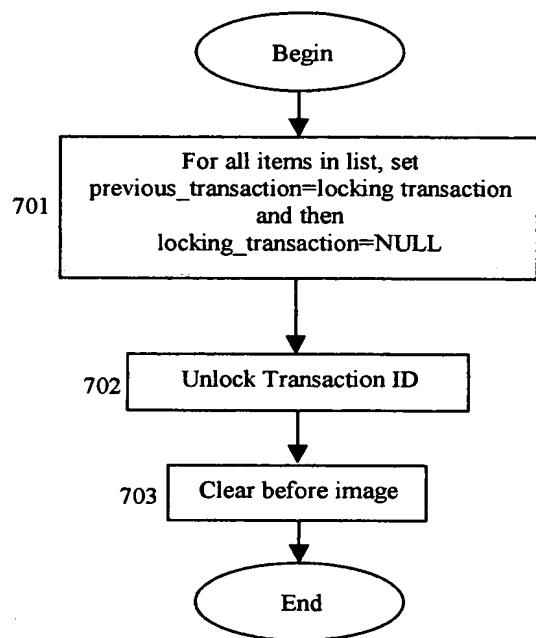
Fig 7 –End Transaction

Fig 8 –Physical block written to the database

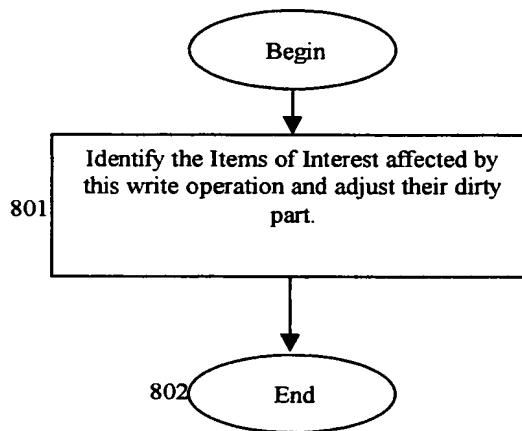
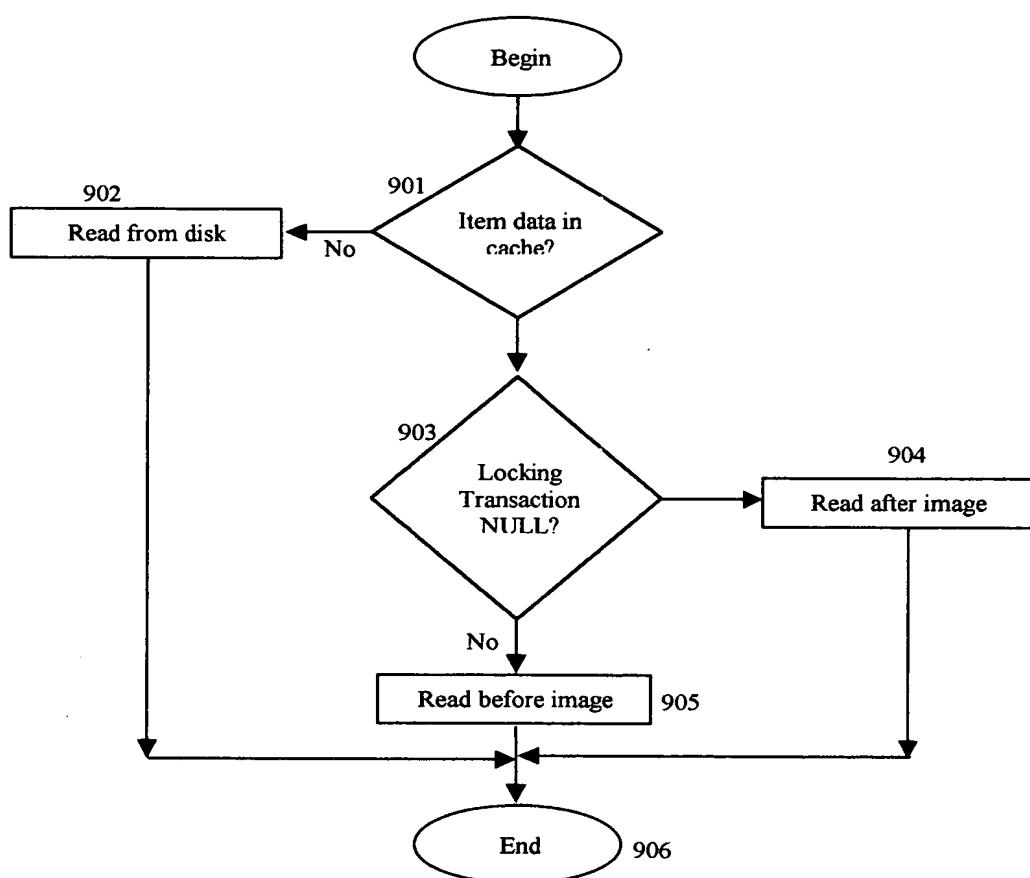


Fig 9 –Unprotected read

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Fig 10 - Protected read

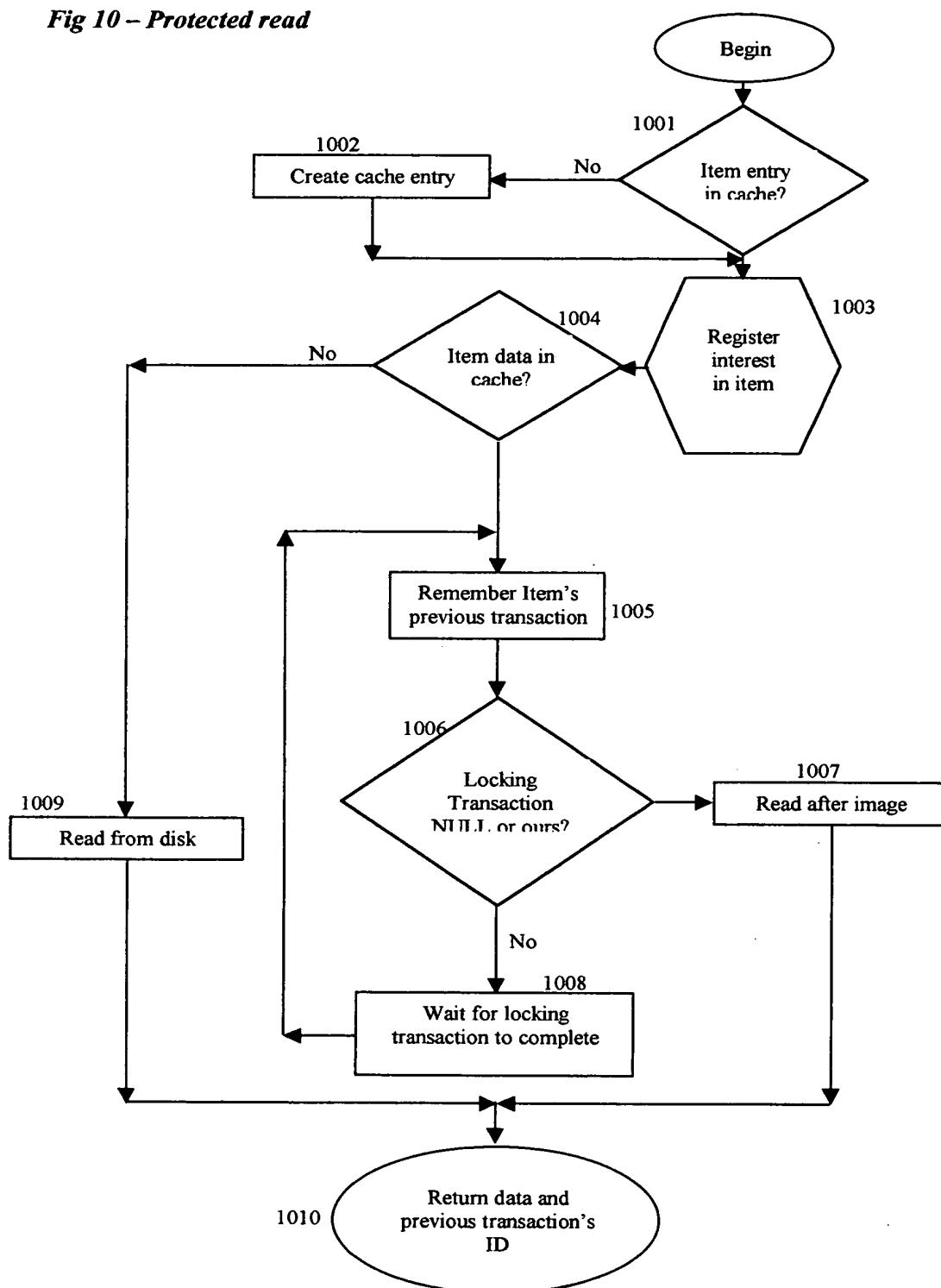


Fig 11 – Register and unregister interest in item

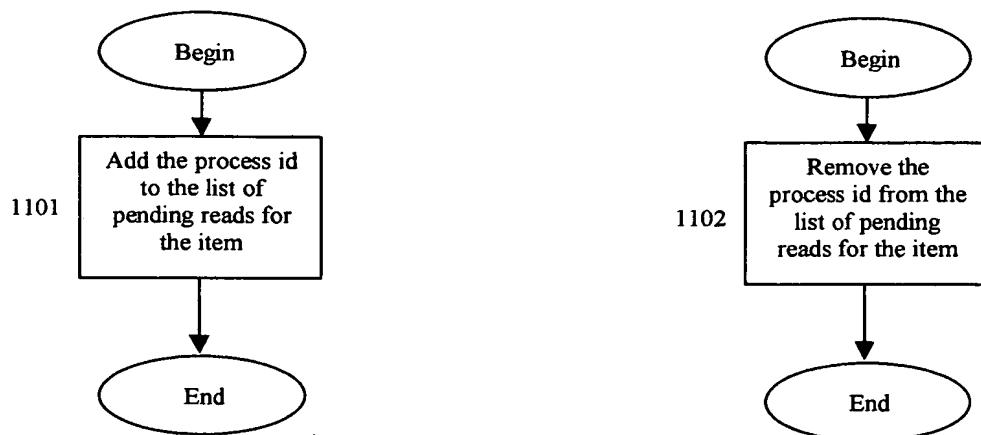


Fig 12 – Check Item validity

430426 1202002

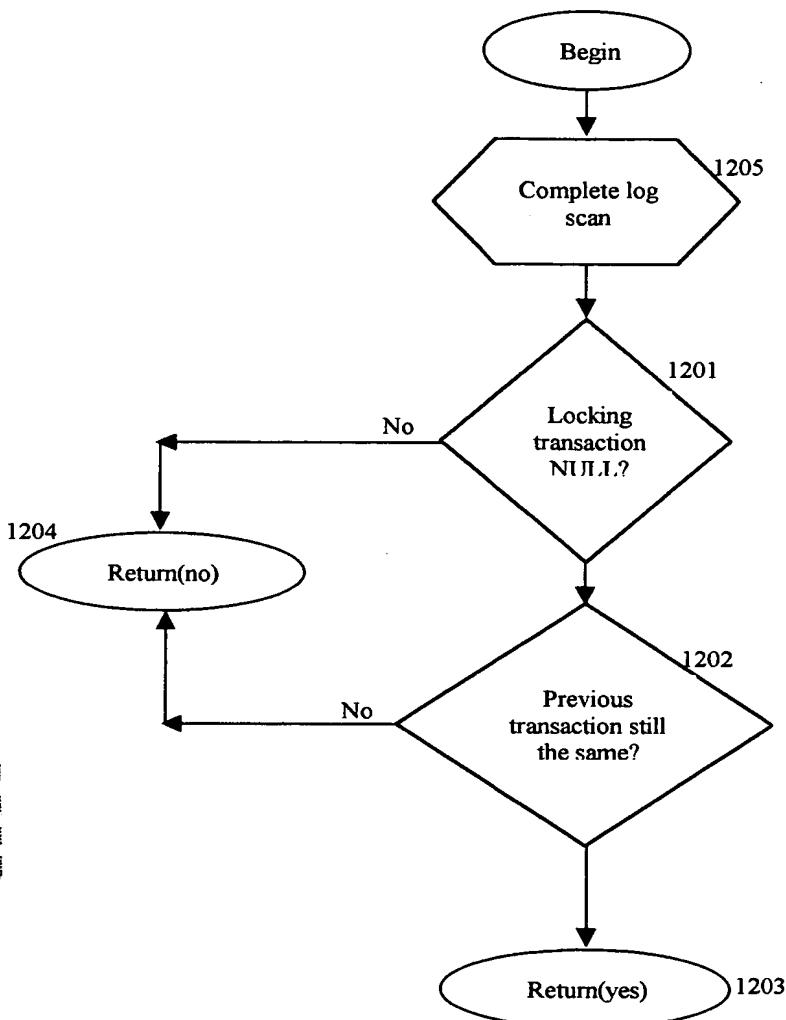


Fig 13 – Post listener

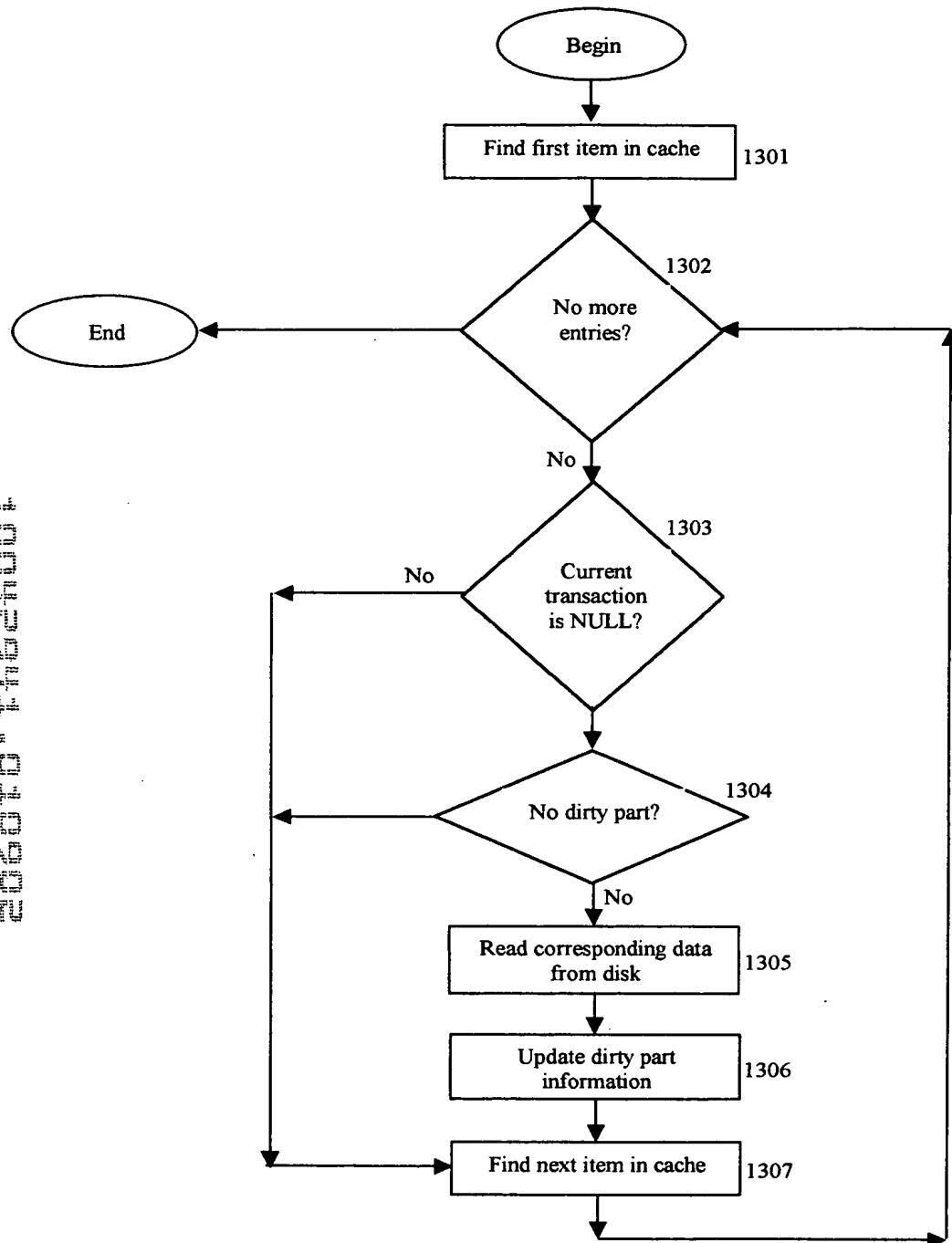


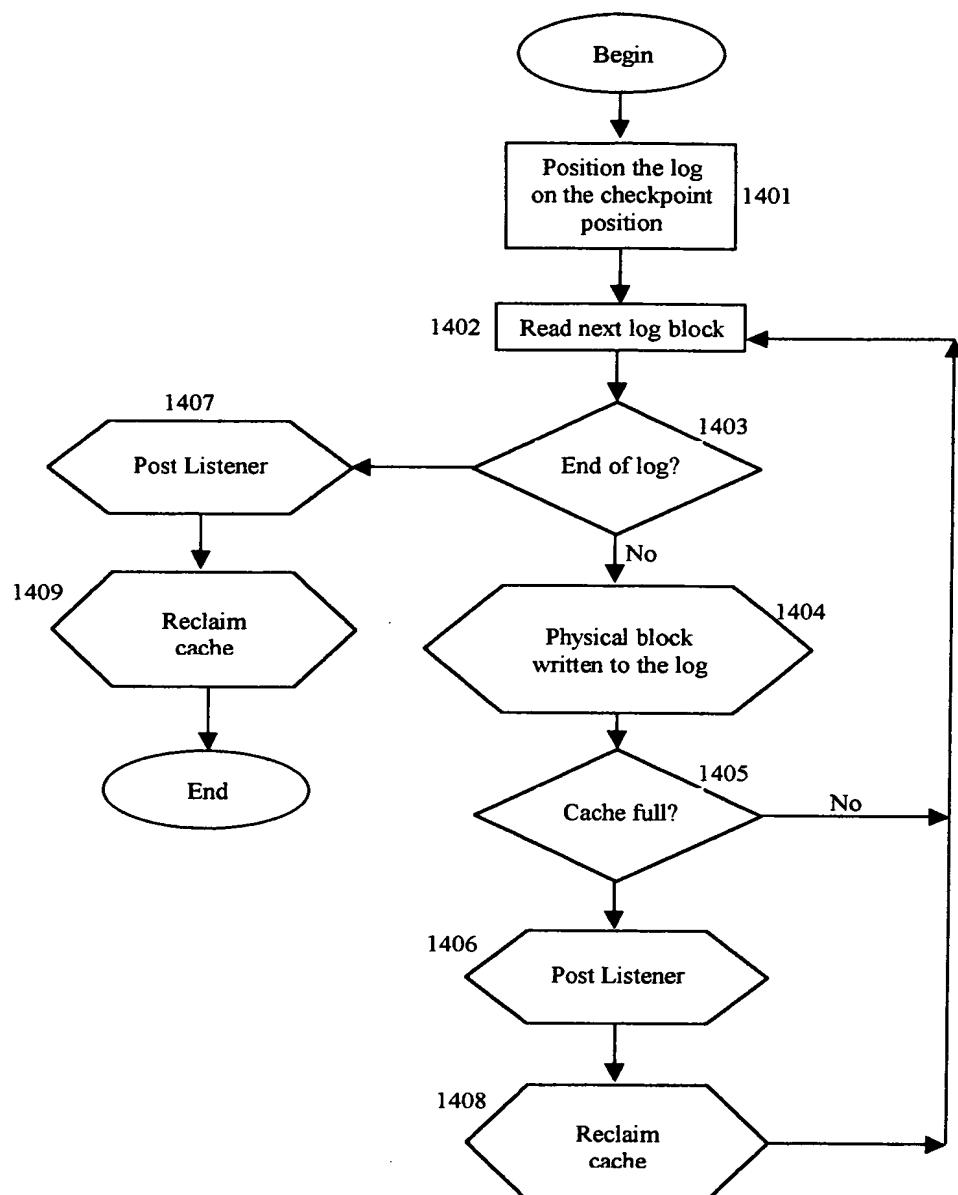
Fig 14 – Recovering the system

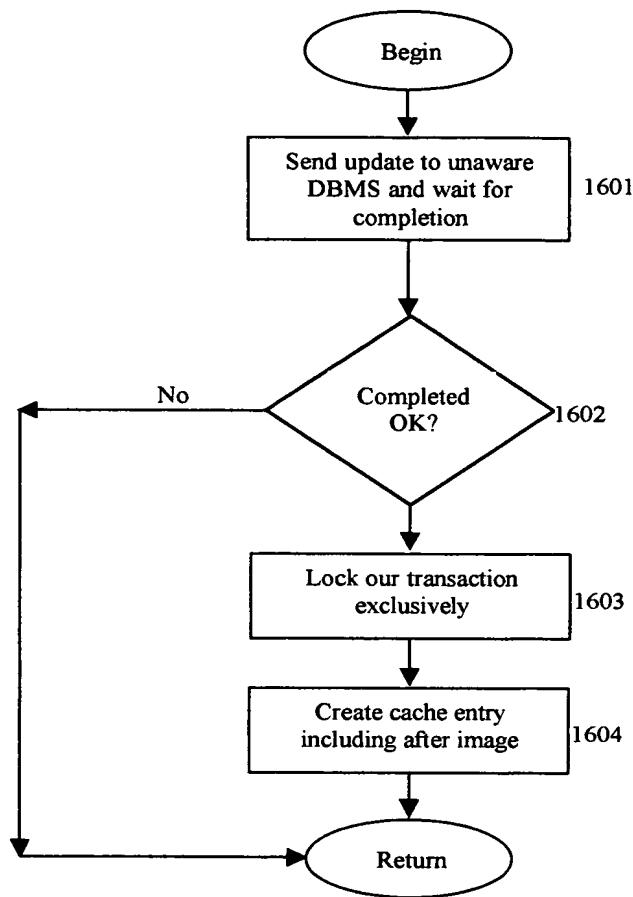
Fig 15 – Entries in the Process items list

1501	1502	1503
Item Type	Item ID	Previous transaction

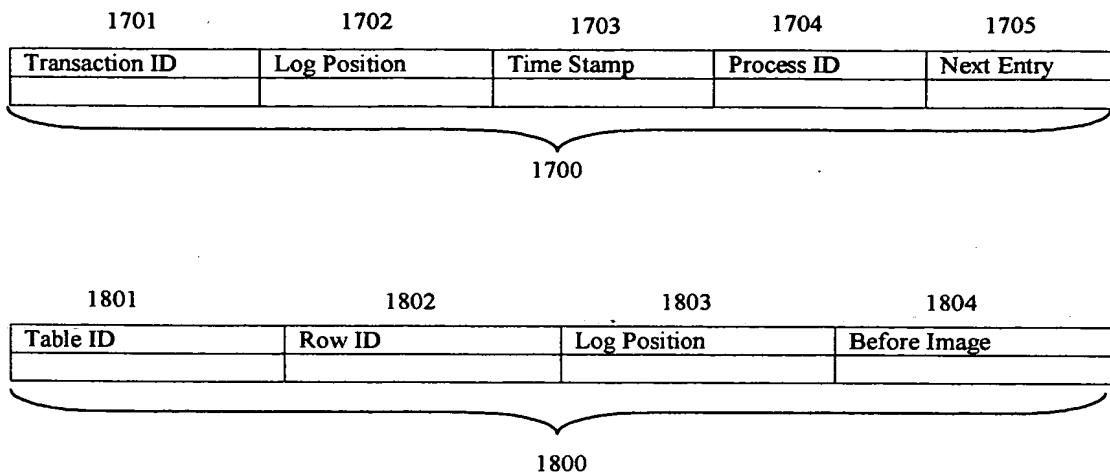
1500

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Fig 16 – Initiating update



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Fig 17 – Supporting snapshots**Fig 18 – is_needed**

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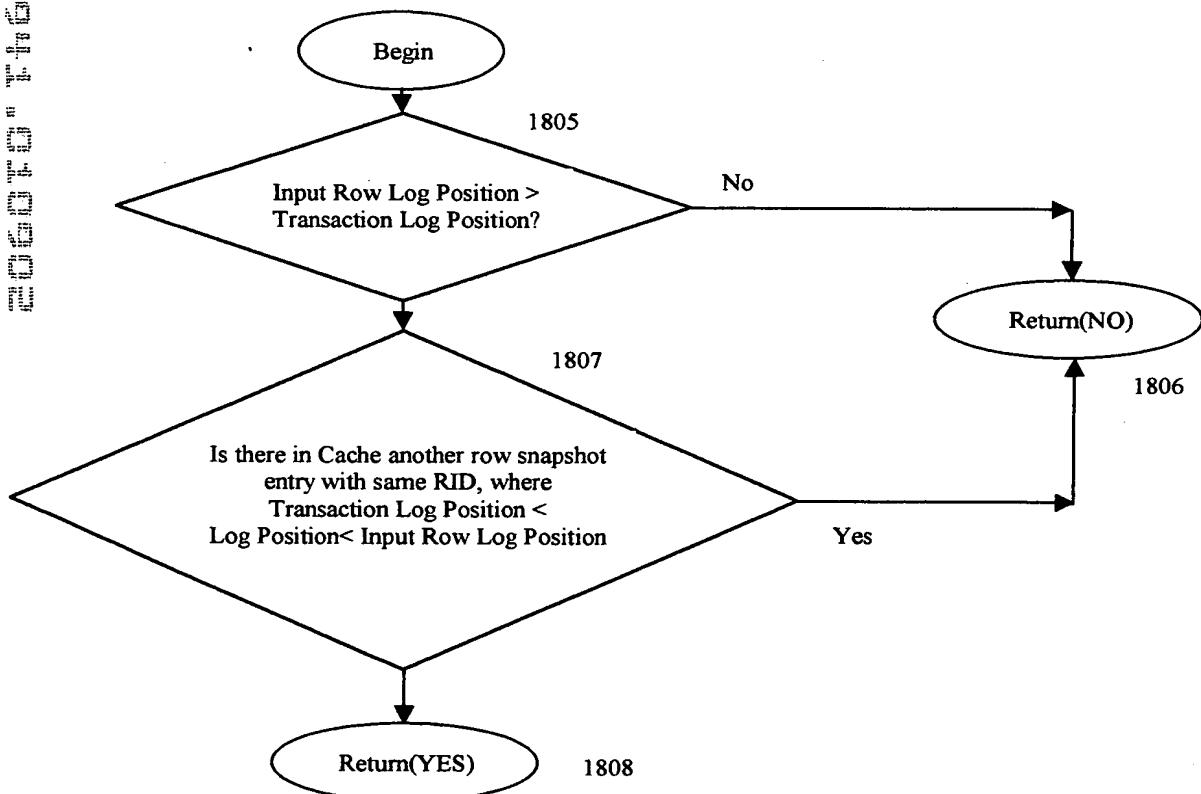
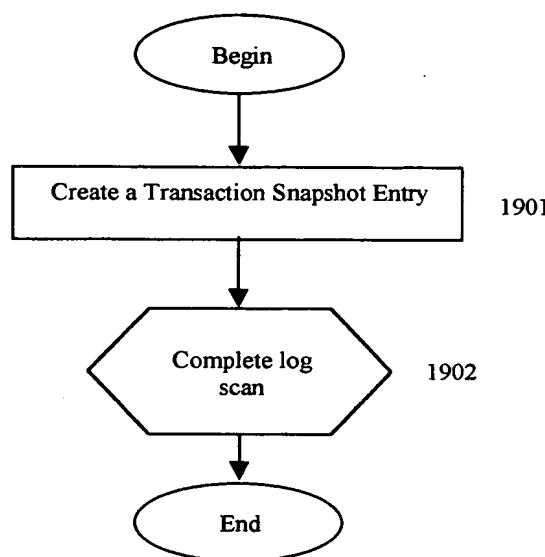


Fig 19 – Start a serializable transaction

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Fig 20 – Snapshot Read